Issue 1-4 (Direct End Office Trunking/Tandem Exhaust)

A. The 240 Trunk Cap On Tandem Trunks Proposed By Verizon Is Arbitrary, Unnecessary, and Discriminatory, and Will Cause Call Blockage.

As explained in WorldCom's Initial Brief, Verizon's proposal to limit the number of trunks WorldCom may utilize at a given Verizon tandem to 240 is arbitrary, unnecessary, discriminatory, and harmful. In particular, given that WorldCom has voluntarily agreed to establish end-office trunks once traffic reaches a DS-1 level, the additional 240 trunk limit is unnecessary. Even Verizon's witness conceded that that the requirement was "a bit of belts and suspenders, to be quite honest. ..." Tr. 10/10/2001 at 1436 (Albert, Verizon). Moreover, the proposal is not applied to the other users of the tandem (IXCs, CMRS providers, etc.), and is thus discriminatory. Indeed, the proposal is particularly discriminatory given that it is not proposed for either the AT&T or Cox contracts. Tr. 10/10/01 at 1416-17 (Edwards, Verizon; Collins, Cox); Verizon Br. at NA-33. The fact that Verizon never even proposed the 240 trunk limit to Cox or AT&T suggests just how unnecessary it is. The proposed 240 trunk limit would also require WorldCom to establish an end office trunk even if the traffic to be carried on that trunk was much less than a DS-1. Tr. 10/09/01 at 1096-1097 (Albert, Verizon). Verizon's proposal would thus impose unnecessary trunking costs on WorldCom. WorldCom Exh. 3, Direct Test. of D. Grieco and G. Ball at 34.

Finally, the 240 trunk limit will cause call blockage in several situations. The latter point is particularly significant because the tandem is the primary route for many calls and the only route for some types of calls, including cellular calls. The Commission

should not endorse a proposal which arbitrarily places at risk WorldCom's ability to receive or send calls through the tandem.

In Verizon's brief, it mounts only a single-paragraph, somewhat anemic defense to its proposal. Rather than discussing any of the specific problems noted above, Verizon talks generally about problems with tandem exhaust. To the extent there is such a problem, however, it is more than adequately addressed by WorldCom's agreement to establish direct end office trunking at a DS-1 level and to provide forecasts to Verizon.[17] The record indicates that direct end office trunking will delay such exhaust by as much as ten years. Tr. 10/10/01 at 1419-1420 (Albert, Verizon). As Verizon witness Albert acknowledged, such end office trunking will essentially eliminate the purported tandem exhaust problem. Id. at 1439. Because Verizon provides no justification for its proposal that WorldCom be prohibited from establishing more than 240 trunks to a given tandem, and because its proposal is harmful and discriminatory, it should be soundly rejected.

B. WorldCom Has the Right Under the Act and Commission Regulations To a Single POI in a LATA at a Tandem.

Verizon also objects to WorldCom's proposed section 1.3.1 in the portion of its brief addressing Issue I-4. Section 1.3.1 is the language proposed by WorldCom seting forth WorldCom's right to a single point of interconnection in a LATA. Thus, as Verizon acknowledges, this language is in fact part of Issue I-1. Verizon Br. at NA-31. As the Commission is aware, WorldCom has the right as a requesting carrier to establish a single

---

[17] Verizon acknowledges that WorldCom has agreed to end office trunking but complains that the language proposed by WorldCom is "too permissive." Verizon has misread the language. The proposed language provides that either party may order direct end office trunks and if one does so, the other party shall install them. Thus if Verizon orders end office trunks, WorldCom must install them. WorldCom's language is mandatory, not permissive.

point of interconnection per LATA. See TX 271 Order. Thus, notwithstanding Verizon's complaint, WorldCom's proposed section 1.3.1 should be approved consistent with the Act and the Commission's precedent.

In any event, the arguments made by Verizon are plainly insubstantial. Verizon generally asserts that interconnection at a single tandem would "play absolute havoc with Verizon's ability to manage capacity." Verizon Br. at NA-31 (quoting Tr. at 1465). This is nonsense. WorldCom's CLEC affiliates have interconnected with Verizon at a single tandem per LATA since 1996 and 1997 and there has been no havoc. Verizon has never filed a complaint with the Virginia SCC or otherwise complained of havoc. Moreover, interconnection at a single tandem per LATA occurs with BellSouth for both WorldCom and AT&T and, not only has it not wreaked havoc, it has worked exceptionally well. See WorldCom Exh. 52; Tr. 10/10/01 at 1622-1624, 1635 (Grieco, WorldCom); id. at 1631 (Talbott, AT&T).

Verizon nonetheless asserts that interconnection at a single tandem per LATA will exacerbate the alleged tandem exhaust problem. As WorldCom witness Grieco explained, however, interconnection at a single tandem alleviates any tandem exhaust problem; by using dedicated trunk ports at a single tandem, ports on all other tandems in a LATA are preserved. Tr. 10/10/01 at 1623 (Grieco, WorldCom) (explaining that with interconnection at a single tandem per LATA, a single "trunk group could be run much more efficiently than five individual tandems trunk groups, reducing the overall tandem port requirement in the LATA between [WorldCom] and Verizon."). The aggregation of a large volume of traffic at one tandem assists with tandem exhaust because it "fills up" the interconnection facility in an efficient manner. As Mr. Grieco explained, individual

trunk groups may, for example, handle more or less traffic during different periods of the day, depending on whether they serve primarily residential or business customers. If that traffic could be combined onto one trunk group, fewer trunks would be used "to terminate the same amount of traffic thereby relieving all of our tandem port requirements from Verizon and four of their tandems, helping to alleviate their tandem exhaust issue." Id. at 1622; see also WorldCom Exh. 49 (Grieco Diagram).

In contrast, if WorldCom were forced to interconnect at multiple tandems, ports on multiple tandems would be used even though no trunk group might be carrying a full load of traffic. Sending small volumes of traffic over multiple interconnection facilities to multiple tandems thus represents inefficient under-use of the facilities.

Finally, contrary to Verizon's suggestion, interconnection at a single tandem in a LATA does not evade WorldCom's agreement to establish direct end office trunks when traffic reaches a DS-1 level. Verizon's argument confuses interconnection facilities and trunking. While the point of interconnection will be at a single tandem, direct end office trunks can still be established to any end office that has 200,000 mou per month. Indeed, that is exactly what occurs today; WorldCom currently has 7,944 end office trunks in Virginia even though there is a single point of interconnection at a tandem. WorldCom Exh. 15, Rebuttal Test. of D. Grieco and G. Ball at 17.

In any event, the issue of an alleged tandem exhaust problem should be placed in context. Verizon has only identified three tandems in Virginia which face near term exhaust and has indicated that it is deploying new switches to address the situation. Id. at 18. The alleged problem has thus been addressed for the near term and WorldCom's agreement regarding end office trunking will delay exhaust for ten more years. Under

these circumstances, and given the fact that connecting at a single tandem per LATA actually reduces tandem exhaust issues, it is clear that Verizon's proposed cap on the number of tandem trunks and its objection to interconnection at a single tandem per LATA are not justified on the basis of tandem exhaust. The Commission should reject Verizon's proposals and accept WorldCom's proposed section 1.3.1.

Issue III-1 (Transit Service)

This issue involves whether Verizon can eliminate the Act's requirement that carriers interconnect directly or indirectly in certain circumstances. In particular,Verizon asserts that CLECs should be required to interconnect only directly with other carriers once the traffic between the carriers reaches a DS-1 level. This assertion, however, flatly conflicts with the Act and this Commission's Orders, and must be rejected. Verizon's position would impose on CLECs a direct interconnection obligation which, under the Act, is applicable only to ILECs. 47 U.S.C. § 251(c)(2). As the Commission noted in the Local Competition Order, the Act permits CLECs to interconnect indirectly. See id. § 251(a).

Verizon nonetheless asserts that "at some point, AT&T and WorldCom should be required to interconnect directly" with third party carriers. This position was explicitly rejected, however, in the Local Competition Order ¶ 997: "This direct interconnection, however, is not required under section 251(a) of all telecommunications carriers." In short, the Act does not mandate direct interconnection by CLECs.

Verizon attempts to avoid this result by characterizing CLEC indirect interconnection as a CLEC duty, not a "right." This distinction is meaningless. Whether the Commission views indirect interconnection as a CLEC right or as a duty, the fact is that indirect interconnection between two CLECs necessarily involves the use of Verizon's facilities. Thus, when Congress imposed on CLECs the duty to interconnect indirectly, it necessarily involved a third party, the ILEC, in the process. If Verizon can refuse to provide transit service, it can prevent a CLEC from fulfilling its duty to interconnect indirectly with other carriers. Accordingly, Verizon must provide transit

service, without an arbitrary DS-1 restriction on volume, pursuant to Section 251(a) of the Act.

Verizon must also provide transit service pursuant to Section 251(c)(3). Transit service is nothing more than the provision of tandem switching. Tandem switching is an unbundled network element which Verizon must provide upon request. Nothing in the Commission's rules permits Verizon to refuse to provide tandem switching or to limit its availability in any way. WorldCom uses transit service – that is, unbundled tandem switching – to provide a telecommunications service to its customers, the completion of calls to third party carriers. Thus, the provision of transit service is also required by Section 251(c)(3) of the Act.

Although the law compels this conclusion, it is not the case that CLECs will never connect directly. Verizon asks rhetorically "why would AT&T ever interconnect with a third party carrier" if transit service is available. The answer, at least for WorldCom, is that while WorldCom is not obligated under the Act to interconnect directly, it will do so when it makes economic sense. When the fixed costs of interconnection to a third party are less than paying the tandem switching rate to Verizon for each transited call, direct interconnection will be economically rational. The incentive for direct interconnection is that at a high enough volume of traffic it costs less than paying for transit service.

It is clear that the costs associated with establishing interconnection to a third party, however, are not justified for the minimal DS-1 level of traffic suggested by Verizon. Carriers do not build facilities for a DS-1 of traffic. A DS-1 can not be transported more than a thousand feet, so the CLEC would have to build fiber rings and add multiplexing equipment to get the DS-1 traffic up to an optical level so that it can be

transported to the other carrier. There is no carrier class transmission equipment to transport a DS-1 any significant distance between two points. [18] One would not put fiber in the ground, add electronics and multiplexing equipment just to pass a DS-1 between two carriers. Tr. 10/17/01 at 2292-2294 (Grieco, WorldCom). Verizon's proposal would thus force WorldCom (and all CLECs) to undertake significant investments that are not justified for a DS-1 level of traffic. The Commission should not adopt this sort of forced inefficiency.

Verizon asserts that requiring CLECs to interconnect directly with one another at a DS-1 level is appropriate because the DS-1 level is also used as the threshold for establishing end office trunks. As explained in WorldCom's Initial Brief, the two situations are very different. It is important to understand the difference between establishing direct end office trunks at a DS-1 level (Issue I-4) and establishing new physical interconnection facilities between two CLECs for a DS-1 level of traffic (Issue III-1). In the end office trunking situation addressed in Issue I-4, DS-1 trunks are established over an already-existing interconnection facility between the CLEC and Verizon tandem. In the transit service situation, Verizon is proposing the considerably more expensive proposition that CLECs establish new interconnection facilities with one another, where none exist, for a DS-1 level of traffic. Establishing direct end office DS-1 trunks over an existing facility is economically reasonable, whereas building a new facility to transport a DS-1 is not. This is precisely why WorldCom is willing to establish end office trunks with Verizon at a DS-1 level over the existing interconnection facility

---

[18] Indeed, WorldCom's normal transport rate is OC-48, or sometimes OC-3 or OC-12.

but objects to building new interconnection facilities to CLECs (and incurring all the cost cited by Mr. Grieco) for such a small volume of traffic.

In sum, the Commission should require Verizon to continue providing transit service with no volume restriction. The provision of transit service is required by the Act and is consistent with the efficient interconnection of all carriers.

Issue III-2 (Rates for Transit Service)

The rate charged for transit service should be the cost-based rate for unbundled tandem switching that the Commission establishes in this proceeding. This rate fully compensates Verizon for the transit service provided. Verizon its proposal that it be permitted to charge additional rates, but offers no support for its proposal other than that imposition of above-cost charges will encourage CLECs to interconnect directly with one another.[19] As noted with respect to Issue III-1, CLECs have an appropriate incentive to interconnect directly based on the relationship between the cost-based tandem switching rate and the cost of direct interconnection. An "incentive" based on an above cost rates as Verizon proposes leads to inefficient decision making. In any event, CLECs have a right to interconnect indirectly and Verizon cannot burden exercise of that right with excessive charges.

Verizon cites TSR Wireless LLC v. U.S. West for the proposition that the Commission has found that "transit service is not an interconnection service for which UNE pricing is appropriate." Verizon Br. at NA-38 (citing 15 FCC Rcd. 11166 at n.70 (2000)). But that case does not hold what Verizon asserts it does. Indeed, all that the Commission said at the footnote cited by Verizon is that the complaining carriers in that case were required to pay for transiting traffic over the ILEC's network. The Commission did not opine on what that charge should be and certainly did not reject UNE pricing. WorldCom agrees that payment must be made for transit service and

---

[19] In its Brief, Verizon only discusses these rates in relation to AT&T. Although Verizon is not explicit about it, presumably this recognizes the fact that these charges were not included in the contract proposed to WorldCom. Tr. 10/17/01 at 2271 (D'Amico, Verizon).

believes that the tandem switching rate is the appropriate charge. Nothing in Verizon's brief seriously suggests otherwise.

Issue III-3 (Mid-Span Meet Interconnection)

"Verizon VA does not dispute that a mid-span meet is an acceptable form of interconnection." Verizon Br. at NA-42. Nor does Verizon dispute that mid-span meets generally are technically feasible, or that WorldCom's specific proposal is technically feasible. Instead, Verizon quibbles with the level of detail WorldCom seeks, and with specific language choices included in WorldCom's proposed contract. As set out in our opening brief, however, and as explained below, detail is necessary if mid-span meets are to become a reality rather than just a possibility. Because WorldCom's proposed language will help ensure that this type of interconnection will actually be implemented, it should be adopted by the Commission.

In its brief Verizon first asserts that WorldCom has proposed contract language giving it a unilateral right to dictate the details of a mid span meet interconnection. That assertion is wrong. WorldCom's proposed contract provides for joint consultation. The proposed language provides that the parties (that is, both parties) will develop interface specifications for the mid-span meet, and also provides for mutual engineering and operation of the mid-span meet. The proposed language allows each party maximum flexibility to choose its own equipment and provides that the parties will work cooperatively to achieve equipment compatibility. WorldCom's proposed contract also provides that requirements for the interconnection specifications will be defined in joint engineering sessions. See WorldCom Proposed ICA §§ 1.1.5.1 and 1.1.5.2.

Although WorldCom has provided for joint consultation, WorldCom also recognizes that it is entitled under the Act to a mid-span meet form of interconnection because this is a technically feasible form of interconnection. Therefore, inclusion of as

much detail in the interconnection agreement regarding the mid-span meet as is possible is the best way of ensuring that WorldCom actually obtains interconnection in this manner. Verizon's language, which requires its consent to every detail of a mid-span meet, grants Verizon the ability to unilaterally veto a mid-span meet. The history between the parties demonstrates that this causes real problems – to date WorldCom has been unable to establish mid-span meets with Verizon.

Verizon's remaining objections to WorldCom's proposed language are uniformly unvalid.

First, Verizon complains that WorldCom could "choose a point that would require a minimal amount of build-out for it but maximize the amount of build-out for Verizon VA." Verizon Br. at NA-42, NA-43. This is not true. WorldCom's proposal requires the carriers to share the cost of a mid span meet 50/50. Specifically, WorldCom's proposed language requires each carrier to provide a fiber to the other carrier's office and to provide a fiber optic terminal. WorldCom Proposed ICA §§ 1.1.5.2.2-1.1.5.2.5. This structure provides WorldCom with an incentive to minimize costs since WorldCom must bear 50% of the cost and provide 50% of the fiber. Tr. 10/09/01 at 1052 (Ball, WorldCom).

Verizon asserts that because WorldCom can pick the "location" of a mid span meet, WorldCom can maximize Verizon's costs. Verizon mischaracterizes the mid-span meet architecture preferred by WorldCom. As noted above, there is no "location" which can be manipulated to maximize cost to one carrier and minimize cost to the other. Each carrier provides fiber which runs to the office of the other carrier. Tr. 10/09/01 at 1047 (Grieco, WorldCom). Although Verizon critiques a scenario in which a carrier chooses a

splice point near its office but distant from the other carrier's office, as Mr. Grieco specifically explained this is not WorldCom's proposal and WorldCom's mid-span meets do not typically involve a splice point. Id. WorldCom's proposal is that each carrier deliver fiber to a manhole outside the other carrier's office and that each carrier then brings that fiber into its office to the fiber optic terminal located therein. There is no splice in this mid-span meet and thus no manipulation of the splice point is possible. Tr. 10/10/01 at 1460-61 (Grieco, WorldCom).

Verizon suggests that the parties "reach mutual agreement on where to locate the mid-span meet." The obvious problem with this is that if Verizon chooses not to reach mutual agreement, WorldCom is deprived of this technically feasible form of interconnection. It is not difficult to imagine Verizon simply choosing to withhold agreement, given Mr. Albert's statement that a reasonable build-out for a mid-span meet should not extend more than a few hundred feet. Tr. 10/10/01 at 1446-1447 (Albert, Verizon). This would ensure that few, if any, mid span meets will ever be established. Not all CLEC switches will be located within a few hundred feet of a Verizon switch. Thus, the forty mid-span meets which WorldCom has in place average 4 miles in length with a maximum distance of 16 miles. WorldCom Exh. 52 (WorldCom's Responses to Record Requests). Other ILECs have been willing to establish these mid span meets, and have not sought to limit their obligation to a build out of a few hundred feet.

Verizon also cites testimony from Mr. Albert to the effect that a negotiation must precede establishing a mid-span meet because of the possibility that WorldCom's proposed mid-span meet will not be technically feasible. The cited testimony does not detract from the appropriateness of WorldCom's proposed contract language, however, as

WorldCom's language does provide for joint consultation and also provides that the parties will not implement WorldCom's proposed specifications if Verizon demonstrates that they are not technically feasible. See § 1.1.5.2. Verizon's position is, essentially, that the ICA should have no detail regarding a mid-span meet and that the parties should negotiate the terms outside the context of the ICA in a Memorandum of Understanding. Verizon's suggestion is not acceptable.

As noted above, WorldCom's proposed language provides for joint negotiation of the mid-span meet details but it also provides some detail and a clear direction that WorldCom is entitled to a mid-span meet. Verizon's proposal for an open-ended negotiation, with no details previously set forth in the ICA, is not an acceptable mechanism for establishing a mid span meet. A mid-span meet will be required when existing points of interconnection exhaust and a new point of interconnection becomes necessary in order for the parties to exchange traffic. Time is of the essence when a new point of interconnection is needed for the exchange of traffic. A mid-span meet may also be required when WorldCom is bringing a new switch on line that must be connected to Verizon's network. Again, time is of the essence when a new switch is being brought into service. The negotiation process suggested by Verizon is not well suited for the purpose of resolving disputes over a mid-span meet, particularly when Verizon reserves the right to veto the mid-span meet. The better course is to have sufficient detail in the ICA so that the mid span meet can be established. The Commission should adopt WorldCom's proposed language which adequately addresses Verizon's need for consultation but which also addresses WorldCom's need for a contract which makes interconnection via a mid-span meet a realistic possibility.

Issue III-4 (Trunk Forecasting)

The interconnection agreement should contain detailed provisions addressing network servicing responsibilities. As explained in WorldCom's opening brief, the parties reached agreement regarding the majority of the proposed language, but were unable to agree on trunk forecasting. See WorldCom Br. at 42; see also Verizon Br. at NA-51. WorldCom proposed that Verizon be required to make enough ports available to WorldCom to provision the number of trunks forecast by WorldCom; Verizon objected, and stated that it would consider the forecasts when determining the number of trunk ports to make available, but would not necessarily abide by those forecasts. See WorldCom Br. at 42. In its brief, Verizon acknowledges that the parties were able to reach agreement on some issues, but inaccurately describes the result of the discussions between the parties and their witnesses. See Verizon Br. at NA-51. In addition, Verizon mischaracterizes its language as accurately reflecting the agreements between the parties. See id. For the reasons explained below and in WorldCom's opening brief, the Commission should reject the Verizon proposal and order the inclusion of the WorldCom language.

Verizon's assertion that "WorldCom agreed that items 4, 5, and 7 (dealing with Verizon's agreement with WorldCom's forecast), listed in WorldCom Exhibit 14 at page 4, were unnecessary," Verizon Br. at NA-51, is incorrect. WorldCom Witness Grieco stated on redirect examination only that he could not state for certain whether those terms were unnecessary. Tr. 10/10/01 at 1577 (D. Grieco, WorldCom). Mr. Grieco also testified that, regardless of Verizon's agreement or disagreement with WorldCom's forecast, WorldCom expects Verizon to make the number of trunks forecasted available

to WorldCom. Tr. 10/10/01 at 1577 (D. Grieco, WorldCom). As explained in WorldCom's testimony and the opening brief, the terms are necessary, and should be included in the agreement. See WorldCom Exh. 14, Direct Test. of D. Grieco at 14; WorldCom Br. at 42-43.

Verizon's claim that its proposed language accurately reflects the agreements reached between the parties is also untrue. Verizon's language only addresses forecasts for two-way trunks, while WorldCom's language addresses two-way and one-way trunks. Further, although Verizon claims to have proposed language incorporating WorldCom's 15% overhead concept, with which Verizon now states that it agrees, see Verizon Br. at NA-51, Verizon's language does not address the 15% overhead concept at all. Finally, Verizon's language includes several concepts on which the parties have not agreed, and for which Verizon failed to introduce any evidence.[20] In contrast, WorldCom's language includes the areas on which the parties had reached agreement, and the agreed-to portions of WorldCom's language should be included in the agreement.

The only disputed language on which the parties introduced evidence concerns Verizon's agreement with WorldCom's forecast. As WorldCom witness Grieco explained, WorldCom expects Verizon to install the number of trunks forecasted and ordered. Tr. 10/10/01 at 1577 (Grieco, WorldCom). Verizon witness Albert stated that Verizon would like to retain the discretion to determine whether it will make the number of trunks forecasted by WorldCom available to WorldCom. Id. at 1512 (Albert, Verizon). Not only does Verizon seek to reserve the right to ignore WorldCom's

[20] As noted in WorldCom's Motion To Strike, Verizon introduced new language in the November DPL, and that language (sections 13.3, 13.3.1 and 13.3.2) is not properly on the record and should not be considered by the Commission.

forecasts, but its "first come, first served" policy would allow it to make trunks available to other carriers that do not provide forecasts at all, if the other carriers order the trunks before WorldCom does. See id. at 1507-09. The Commission should not allow other carriers to reap the benefit of WorldCom's carefully prepared forecast, to WorldCom's detriment. In sum, the number of trunks forecast by WorldCom should be made available to WorldCom by Verizon, and WorldCom's language should be adopted.